

DaimlerChrysler AG

Patent Claims

5 1. An automotive shell structure (1) comprising
- substantially parallel longitudinal members (2)
arranged on each side of the shell structure (1), with
- energy-absorbing elements (3) which, in the event
of an impact, absorb impact energy and also channel
10 impact energy into the longitudinal members (2) being
provided on the ends of the longitudinal members (2)
which face the front in the direction of travel,
characterized in that
there are provided additional means for energy
15 absorption which channel the impact energy into other
regions of the shell structure (1) in a controlled
manner.

2. The automotive shell structure (1) as claimed in
20 claim 1,
characterized by
a serving integral support (5) extending between the
longitudinal members (2).

25 3. The automotive shell structure (1) as claimed in
claim 1 or 2,
characterized in that
the additional means for energy absorption are arranged
at the end of the integral support (5) facing the front
30 in the direction of travel.

4. The automotive shell structure (1) as claimed in
claim 3,
characterized in that
35 the additional means for energy absorption are designed
as crash boxes (13).

5. The automotive shell structure (1) as claimed in
claim 4,

characterized in that
one crash box (13) is provided on each side of the end
of the integral support (5) facing the front in the
direction of travel.

5

6. The automotive shell structure (1) as claimed in
claim 4 or 5,
characterized in that
the integral support (5) has mounting sockets whose
10 shape is adapted to the shape of the crash boxes (13).

7. The automotive shell structure (1) as claimed in
one of claims 4 to 6,
characterized in that
15 the crash boxes (13) are connected to one another via a
crossmember (14).

8. The automotive shell structure (1) as claimed in
claim 7,
20 characterized in that
the crossmember (14) is of multipart design.

9. The automotive shell structure (1) as claimed in
claim 8,
25 characterized in that
the crossmember (14) comprises a right and left
crossmember part (15), the two crossmember parts (15)
having one end connected to the crash box (13) and the
other end connected to the integral support (5).

30

10. The automotive shell structure (1) as claimed in
claim 9,
characterized in that
the crossmember parts (15) are connected centrally
35 between the crash boxes (3) to the integral support
(5).

11. The automotive shell structure (1) as claimed in
one of claims 7 to 9,

characterized in that
the crossmember (14) is constructed in such a way that,
on the principle of a lever arrangement, the impact
force (A) is channeled into the crash boxes (13)
5 substantially in the longitudinal direction (B) of the
vehicle.